JK Cement Works, Muddapur
A Unit of JK Cement Ltd.
CIN : L17229UP1994PLC017199
Works : P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India
+91 - 8350-289954, 289607
factory.muddapur@jkcement.com
www.jkcement.com

Through: Courier Service

Reg.No. JK-MIU/ENV/2025-26/60/132 ***Date: 26.09.2025***

To
The Member Secretary,
Karnataka State Pollution Control Board,
 # 49, 4th& 5th floor,
Parisara Bhavana, Church Street,
Bangalore – 560 001.

Dear Sir,

Sub: Submission of **Environmental Statement Report in "Form-V" FY 2024-25** of Integrated Cement & Captive Power Plant of JK Cement works, Muddapur, (Unit: JK Cement Ltd) located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-reg

Ref:-1 Notification No.Vide GSR 329 (E)dated 13.03.92 and GSR 386 (E)dated 22.04.1993.

Ref:-2 Vide Combined Consent Order AW-340496 dated 06.11.2023.

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As mentioned in the above cited subject matter, we are here by submitting the "Environmental Statement Report" FY 2024-25 in the prescribed format (Form V) under Environment (Protection) Rules, 1986 pertaining to our Integrated Cement & Captive Power Plant located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka

Kindly acknowledge the receipt of the same.

Yours faithfully
For J.K. Cement Works, Muddapur (Karnataka)
(Unit: J.K. Cement Ltd.)

Prabhat Singh Parihar
(Unit Head)

Enc: as above

cc:

1. The Environmental Officer, Karnataka State Pollution Control Board, Sector No. 07, by pass road, Navanagar, Bagalkot- 587 102

2. Additional Principal Chief Conservator of Forests (C), Ministry of Environment & Forest, Govt. of India, Regional office (Southern zone), Kendra Sedan, IVth Floor, E & F Wings,17th Main Road, II Block, Koramangala, Bengaluru, Karnataka -560 034.

3. Scientist 'D' & Incharge, Central Pollution Control Board, 1st & 2nd Floors, Nisarga Bhavan, A-Block, Thimmaiah, Main Road, 7thD Cross, Shivanagar, Opp. Pushpanjali Theatre, Bengaluru, Karnataka 560 079

ENVIRONMENTAL STATEMENT
[FORM-V]

for

Integrated Cement Plant of JK Cement Works, Muddapur

Clinker :2.64 MTPA
Cement: 3.5 MTPA (OPC/PPC/PSC, etc.)
and
Captive Power Plant-25 MW (1*25)

FOR THE FINANCIAL YEAR 2024-2025

by

M/s.JK Cement Works, Muddapur

Unit: JK Cement Ltd.

Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-587122

CONTENTS

FORM - V

(See Rule 14) of Environment (Protection) Rules, 1986)

Environmental Statement for the Financial Year ending on 31st March 2025

PART – A

(i)	Name and address of the owner /occupier of the industry operation or process.	:	Mr. Prabhat Singh Parihar (Unit Head) J.K. Cement Works (Unit: J. K. Cement Limited) Village- Muddapur, Taluka- Mudhol, District-Bagalkot (Karnataka)- 587122
(ii)	Industry category Primary (STC Code) Secondary (SIC Code)	: : :	 Large- Red (17 Cat) Cement
(iii)	Production Capacity	:	Clinker -: 2.64 Million Tons Per Annum (MTPA) Cement (OPC/PPC/ PSC, etc.) -: 3.5 Million Tons Per Annum (MTPA) Captive Power Plant -: 1X25 MWH (25MWH) WHRS -: 18 MWH
(iv)	Year of Establishment	:	2009
(v)	Date of Last Environmental Statement submitted	:	20.09.2024

PART – B

(i) Water Consumption m3/day process-

Water Consumption m^3/day process-		
Description	**During the Previous Financial Year (2023-24)**	**During the Current Financial Year (2024-25)**
a) Process & Cooling	274760 KL	285656 KL

b) Domestic	58383 KL	59118 KL
Name of the Product	**Process Water Consumption per unit of Product Output**	
	During the Previous Financial Year (2023-24)	**During the Current Financial Year (2024-25)**
Cement (OPC, PPC, Slag and Cement Based Adhesive) (m3/MT)	0.0799 m^3/MT of cement	0.0951 m^3/MT of cement

Raw Material Consumption			**Consumption of Raw Material Per unit of Output**	
Sl. No	**Name of Raw Materials**	**Name of Product**	**During the Previous Financial Year (2023-2024)**	**During the Current Financial Year (2024-2025)**
1	Lime Stone	Cement (OPC, Blended cement, PSC)	1.038	1.018
2	Additives		0.022	0.021
3	Coal/Pet coke (Cement Plant)		0.050	0.053
4	AFR		0.066	0.056
5	Gypsum		0.028	0.034
6	Fly ash		0.223	0.205
7	Slag		0.021	0.049

Power Plant

Name of the Raw Material	**Name of the Product**	**Consumption of Raw Material (metric ton) per MW of Output**	
		During the Previous Financial Year (2023-24)	**During the Current Financial Year (2024-25)**
Coal / Petcoke (CPP)	Power	NIL	NIL

Note-CPP is not in operation since November-2021.

PART-C

Pollution Generated

(Parameters as specified in the consent issued)

STP Treated Effluent			
Pollutant	**Quantity of pollution generated**	**Standards in mg/liter except pH**	**Percentage of variation from prescribed standards with reasons**
pH Value	7.3	6.5 to 9.0	Within prescribed limits
TDS	1424	-	Within prescribed limits
TSS	12	<50	Within prescribed limits

BOD for 3 days at 27°C	3.9	20	Within prescribed limits
COD as O_2	18.8	30	Within prescribed limits
Fecal Coliform Count	Nil	-	Within prescribed limits

Stack gas Quality			
Pollutant	**Avg. Concentrations of Pollutants in Discharges (Mass/volume) mg/Nm³**	**Standards in mg/Nm³**	**Percentage of variation from prescribed standards with reasons**
Kiln stack			
PM	19.1	30	Within prescribed limits
SO_2	21.7	100	Within prescribed limits
NO_x	233.8	800	Within prescribed limits
Coal Mill stack			
PM	20.4	30	Within prescribed limits
Cement Mill stack			
Cement Mill-1 PM	17.2	30	Within prescribed limits
Cement Mill-2 PM	19.1	30	Within prescribed limits
Cement Mill-3 PM	15.8	30	Within prescribed limits
Cooler stack			
PM	20.8	30	Within prescribed limits

Ambient Air Quality			
Pollutant	**Concentrations of Pollutants in Discharges (Mass/volume) µg/m³**	**Annual Avg in µg/m³**	**Percentage of variation from prescribed standards with reasons**
Core zone- Plant			
Near Administration Building			
PM_{10}	52.8	60	Within Prescribed limits
$PM_{2.5}$	16.1	40	Within Prescribed limits
SO_2	13.5	50	Within Prescribed limits
NO_x	14.5	40	Within Prescribed limits
Colony Guest House			
PM_{10}	52.9	60	Within Prescribed limits
$PM_{2.5}$	15.9	40	Within Prescribed limits
SO_2	15.5	50	Within Prescribed limits
NO_x	14.2	40	Within Prescribed limits
D Block Colony Quarters			
PM_{10}	53.7	60	Within Prescribed limits
$PM_{2.5}$	17.2	40	Within Prescribed limits
SO_2	13.2	50	Within Prescribed limits
NO_x	16.3	40	Within Prescribed limits

Buffer Zone			
Bommanbudhini Village			
PM_{10}	53.7	60	Within Prescribed limits
$PM_{2.5}$	17.5	40	Within Prescribed limits
SO_2	16.5	50	Within Prescribed limits
NO_x	16.9	40	Within Prescribed limits
Thimmapur Village			
PM_{10}	54.1	60	Within Prescribed limits
$PM_{2.5}$	16.7	40	Within Prescribed limits
SO_2	14.8	50	Within Prescribed limits
NO_x	15.1	40	Within Prescribed limits
Petlur Village			
PM_{10}	51.8	60	Within Prescribed limits
$PM_{2.5}$	17.7	40	Within Prescribed limits
SO_2	15.8	50	Within Prescribed limits
NO_x	13.7	40	Within Prescribed limits
Halki Village			
PM_{10}	54.2	60	Within Prescribed limits
$PM_{2.5}$	18.0	40	Within Prescribed limits
SO_2	15.4	50	Within Prescribed limits
NO_x	16.3	40	Within Prescribed limits
Metgudda Village			
PM_{10}	55.7	60	Within Prescribed limits
$PM_{2.5}$	19.3	40	Within Prescribed limits
SO_2	16.6	50	Within Prescribed limits
NO_x	15.9	40	Within Prescribed limits
Muddapur Village			
PM_{10}	54.1	60	Within Prescribed limits
$PM_{2.5}$	17.3	40	Within Prescribed limits
SO_2	16.3	50	Within Prescribed limits
NO_x	16.1	40	Within Prescribed limits

B.Power Plant:

Pollutants	Concentrations of Pollutants in Discharges (Mass/volume) mg/liter, Except pH	Standards in mg/liter, Except pH	Percentage of variation from prescribed standards with reasons
(a) Water			
pH	-	5.5 to 9.0	CPP is not in operation since Nov-2021.
Suspended Solids	-	100	
Oil & Grease	-	10	
Temperature	-	Not more than 5°C higher than	

Pollutants	Concentrations of Pollutants in Discharges (Mass/volume) mg/liter, Except pH	Standards in mg/liter, Except pH	Percentage of variation from prescribed standards with reasons
		the intake water temperature	
(b) Air	**mg/Nm³**	**mg/Nm³**	
PM	-	50	
SO_2	-	600	
NO_x	-	450**	

***Note: NO_x Standard as per MoEF & CC notification dated GSR 622 (E)dated 19th October 2020*

PART – D
(as specified under Hazardous Wastes (Management & Handling) Rules, 1989

Hazardous Waste		Total Quantity Generated in KL	
		During the Previous Financial Year (2023-24)	During the Current Financial Year (2024-25)
(a)	From Process Used Oil (Category No 5.1)	NIL	15.63 MT
(b)	From Pollution Control Facilities	NIL	NIL

Quantity of e-waste under E-Waste (Management) Rules, 2016-

We have disposed following quantity of e-waste to KSPCB authorized recycler in 2024-25:

S.No	Waste Name	E-Waste quantity generated during the year 2023-24	E-Waste quantity sent to recycler during the year 2024-25
1	E-waste	3.5 MT	NIL

Note- e-waste disposed to KSPCB authorized recycler M/s E-Friendly Waste Recyclers, Bengaluru.

Batteries (Management and Handling) Rules, 2001, 2012 and amended 2022 there to

We have purchased 54 No's batteries and disposed 52 No's to KSPCB authorized Recyclers in FY 2024-25.

PART – E

Solid Wastes

Solid Waste		Total Quantity in metric tons	
		During the Previous Financial Year (2023-24)	During the Current Financial Year (2024-25)
(a)	From Cement Process:	NIL	NIL
(b)	From Pollution Control Facilities- Generated	Recycled back to Process	Recycled back to Process
(c)	From Captive Thermal Power plant: Quantity recycled or re-utilized / Sold / Disposed a. Fly Ash b. Bottom Ash	 NIL NIL	 NIL NIL
(d)	Fly Ash – Procurement Consumption	457659 MT 455171 MT	541591 MT 616285 MT

PART – F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes

Name of the Waste		Quantity	Characteristics	Disposal Practice Adopted
(1)	**Hazardous Waste** Used / Spent Oil (Category No.5.1)	15.63 MT	Waste Oil containing 9000-11000 kcal/Kg of GCV	Sold to KSPCB authorized party
(2)	**Solid Waste** Flyash Ash	NIL	Solid containing Sio_2 : 60.40%, Fe_2O_3 : 5.81 % LOI : 0.42 % Al_2O_3 : 23.93%	100% Utilized within the premises (replacement of Boiler bed materials, used as sand for masonry works)
(3)	**Solid Waste** Bottom Ash	NIL	Solid containing SiO_2 : 60.68 %, Fe_2O_3 : 6.20%	100 % of Fly Ash Utilized in Cement production.

Name of the Waste		Quantity	Characteristics	Disposal Practice Adopted
			LOI : 2.30 % K_2O : 1.34% Na_2O : 0.06% Al_2O_3 : 25.92 %	
(4)	Dust collected in ESP, Bag House and Bag Filters	-	-	recycled back into the process.

Note- 616285 Metric ton of Fly Ash has been used from different sources as our CPP is not in operation since 02.11.2021. The main source of Flyash is NTPC Kudagi.

PART – G

Impact of the Pollution Abatement Measures Taken on Conservation of Natural Resources and on the Cost of Production.

Following measures have been adopted for abatement of pollution, conservation of natural resources: -

- ★ Stack Emissions were controlled by installation of Pollution control equipment's i.e ESP's and Baghouses.
- ★ Regular monitoring of Ambient Air Quality, Stack Emissions, Fugitive and Effluent Quality of treated wastewater have been taken up to the evaluate the efficiency of the pollution control systems and necessary control measures are taken.
- ★ Roof top rain water recharge measures and rain water harvesting pits have been constructed for collection and utilization of rain water.
- ★ As our pollution control equipment's are working with higher efficiency, the maximum portion of materials collected in APCD's are recycled and used in process, thus conserving raw material and reducing dust emission.
- ★ Fly ash procured from surrounding Power Plants are being used in the manufacturing of PPC, thus utilizing waste and conserving limestone.
- ★ Treated effluent from CPP & Domestic sewage from residential colony is used for greenbelt development and dust suppression. Thus, the same amount of fresh water is being conserved.
- ★ Various types of AFR (Hazardous and non-hazardous) from nearby ULB's and other industries are used as alternate fuel in kiln which helps in conserving fossil fuel i.e., Coal.
- ★ Various Projects taken up to conserve energy are as follows:

S.No.	Energy efficiency improvement measures (EEIM)	Energy Saving (KWH)
1	Bag filter fan speed optimization (All four Packers)	5808

2	Optimization of Hot air inlet flow nozzle ring dummy method for Energy Efficiency (Coal Mill)	29008
3	Optimization in idle run hous of transport group (Cement Mill-1)	1620
4	Feed belt motor derated (from 15 KW to 11 KW) (cement Mill-2)	4291
5	01 feed Air slide blower - Replacement of standard efficiency motor by IE 03 series motor (Cement Silo)	175
6	DCC - 03 motor was running at 100 % RPM Motor RPM reduced 100 % to 50 % by VFD (AQC Boiler)	3802
7	Optimization in Drag Chain Conveyor running hrs. (AQC and PH Boiler)	53064
8	Condensate extraction pump (CEP) Auto Logic implementation	20600
9	Auxiliary Cooling Tower pump (ACW) Auto Logic implementation	51500
10	Compressor HMI configuration cycle time gap (loading cycles / unloading cycles) revised	10600
11	BFP was operating on manual mode BFP was kept on auto mode (logic implemented) discharge header pressure	10600
12	A. Replacement of existing old model (Unit II) ACC fans by Energy Efficient FRP Fans B. Installation of VFD Panels	22500
	Total Energy saving	**213568**

PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution

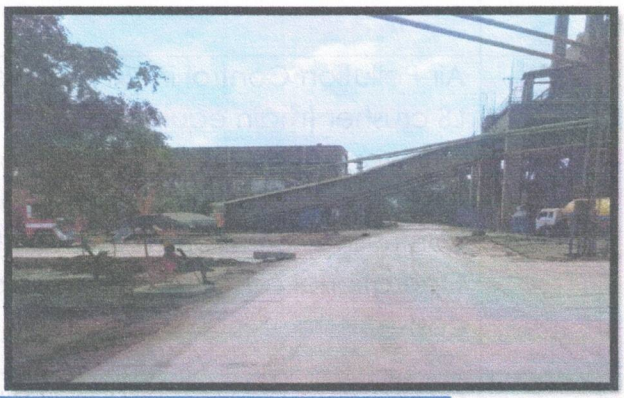
Additional measures / Investment Proposals for Environmental Protection for the year 2024-25

Repair of damaged roads and construction of new CC roads to reduce fugitive emissions near cement mill, Fly ash silo area, AFR shed area, etc.

CC Road at Packing Plant

Road at Admin Building

1.Fugitive dust emission control measures are in place such as deployment of road sweeping machines, closed material conveying system, raw material and finished products are stored in closed sheds and silos, all the material transfer points & silo tops are provided with bag filter, pneumatic handling of flyash and water spraying on the material yards and roads.

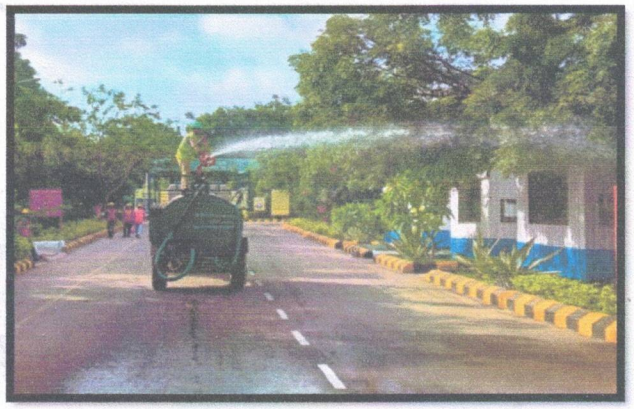


CC Roads constructed in plant to reduce fugitive emission

Road Sweeping machine

Covered material storage

Closed conveying system



mobile water sprinkler

Adequate funds are earmarked for environmental management activities. Capital and recurring expenditure incurred for the same for the period FY2024-25 are tabulated as under:

S.No	Description of the Expenditure	Amount incurred in Lakhs
1	Air Pollution Control in Kiln, Cooler, cement mill, coal mill, and LS crusher (main equipment) including stacks, Bag filters along with ventilation system for the control of fugitive dust emissions from the plant including stacks / Cost of equipment for controlling emission like bag house, ESP, Bag filter etc., Operational cost / electricity cost, Operation & Maintenance cost.	**870.53**
2	Fly ash Silo's and ash handling systems.	**54.67**
3	Emission Monitoring equipment (including online emission monitoring equipment (CEMS) at sources and ambient air quality in the vicinity) and laboratory.	**22.64**
4	Green Belt Development, Sewage Treatment plant and Water Harvesting Schemes for plant.	**33.11**
5	Extra expenditure on green purchase (Purchase of green fuel, recycled materials or any other such purchase (AFR purchase, Fly ash and Slag purchase) to reduce environmental footprint.	**9467.91**
6	Other environmental management costs (AFR system operation, odour control, environmental training/Award, Environmental License Fees, etc.)	**1043.77**

	Total cost	**11492.66**

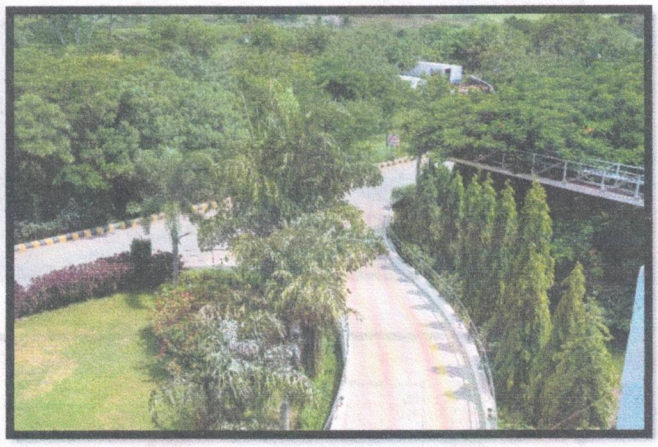
Additional Measures adopted for Environmental Protection:

1. We have constructed rain water harvesting structures inside Plant & colony premises.
2. Increase in usage of Alternative Fuels and Raw Materials (AFR).
3. Increase in manufacturing of PPC grade cement.
4. Conducting various awareness campaigns on Environmental & Sustainability aspects

PART – I

Any other particulars for improving the quality of environment

a. Green Belt development has been taken up in phased manner, during the FY 2024-25, we have planted 6925 no's saplings in Plant and colony area. The total plantation covered from inception of plant to 31st March 2025 in plant and colony area covering an area of 119 Acres @ 46.03% of total land area (258.37 Acre).



View of Greenbelt and plantation

b. Further we have planned for plantation of 5000 no's Saplings in the Year 25-26.
c. No discharge of effluent to surrounding areas and wastewater generated is treated and reused in Cement Plant for development of Green Belt.
d. Integrated Management Systems have been Implemented - ISO 9001, ISO 14001, 45001 & 50001.

e. Full-fledged Environmental Cell to carryout Environmental monitoring of stack Emissions, Ambient Air, Noise and Fugitive dust emissions & compliance tracking software of Lex care, Green Belt development, operation and maintenance of CAAQMS & CEMS and STP Operations.
f. State of the art AFR laboratory for finger print analysis of wastes.
g. Environmental Awareness:

World Environment Day 5th June 2025 is the biggest international day for the environment, led by the United Nations Environment Programme (UNEP), and held annually since 1972, it has grown to be the largest global platform for environmental outreach. It is celebrated by millions of people across the world.

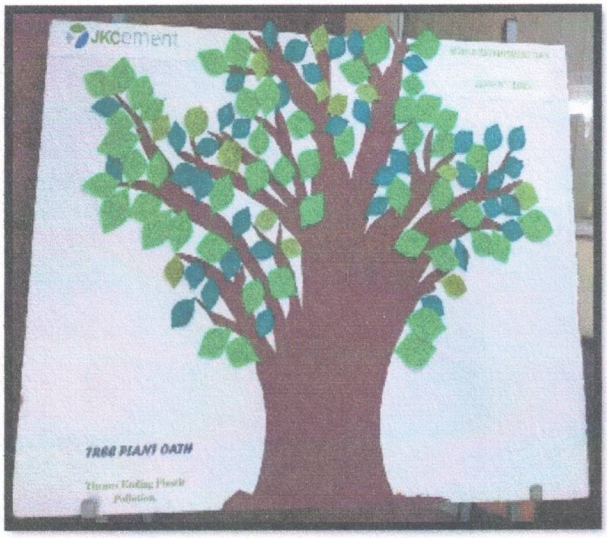
JKCW, Muddapur celebrated World Environment Week with a significant plantation drive, planting a total of 1,330 trees across the cement plant, colony, and Petlur village. Seed balls were distributed to all employees. Leading up to this day, we hosted an Environmental Week, filled with awareness activities. These engaging events brought together employees, workmen, children, and colony residents, fostering a collective understanding and appreciation for environmental protection. Glimpses of the event are as follows: **Plantation drive at Plant & Colony on World Environment day**

Upcycling the Waste to Best/Art (Colony Ladies)

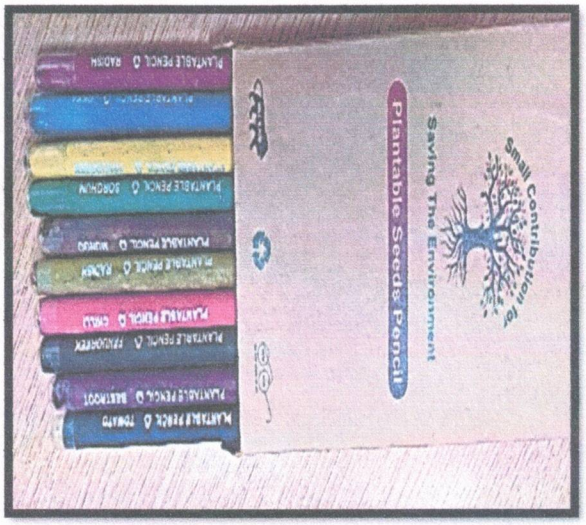
Environmental themed fancy dress Competition (Colony Children's)

Seed Ball Distribution at Main

Plantation at Petlur Village



Tree Plant Oath Activity



Distributed Seed pencil as Consolation Prize for School and Colony Children